selecting at least two neighbor points from said data set that are close and more exterior than said first point, said first point and said two neighbor points forming selected data;

forming a polygon with said selected data;

repeating said selecting steps and said forming steps forming a convex hull shape thus estimating the boundary of the heart from said raw data set.

2. A method of modeling a chamber of the heart in three-dimensions comprising:

collecting a set of points inside the heart, each point having coordinates in three dimensional space;

defining an interior direction and exterior direction for said raw data set;

selecting a first point;

selecting at least two neighbor points from said data set that are close and more exterior than said first point, said first point and said two neighbor points forming selected data;

forming a polygon with said selected data;

repeating said selecting steps and said forming steps forming a computed convex hull shape from said raw data set;

resampling said computed convex hull shape on a regular grid to generate an enlarged set of points;

smoothing said convex hull shape forming a mathematically differentiable shape approximating the physiologic shape of the heart chamber from said enlarged set of points.

smoothing said convex hull shape forming a mathematically differentiable shape approximating the physiologic shape of the heart chamber from said enlarged set of points.

3. The method of claim 2 wherein said collection process collects points at a set of times synchronized with the cardiac rhythm cycle, such that said points have physical coordinates in space at a specific time in the cardiac cycle.